

Please reply to -

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OFFICE OF THE
CHIEF COUNSEL
RULES DOCKET

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Joint Aviation Authorities

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Federal Aviation Administration
800 Independence Avenue S W
WASHINGTON, DC 20591
USA

FAA-99-5401-38

OUR REF
EAAWG/99/0361

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61336

Dear Sir

Comments on Docket FAA-19996401 Notice 99-02 Aging Airplane Safety

Page 163 15 of FR Vol.64 No.63 refers to the International Compatibility of the proposed rules of this NPRM. The JAA have been aware of the issues addressed by the Aging Aircraft Safety Act 1991 since its publication through the activities of the various international working groups on ageing aircraft AAWG, SAAWG and EAAWG. Consequently on behalf of the JAA's EAAWG [European Ageing Aircraft Working Group] this letter is to express general support for thrust of the stated rules with respect to the proposals to limit the operation of aircraft that do not have a properly substantiated supplemental structural inspection programmes [damage tolerance based Inspections and Procedures]. One of the prime objectives of EAAWG is to find ways of integrating the USA derived rules on ageing aircraft into the JAA regulatory system. This is not always a simple task, particularly when they are Operating rules covering a continuing airworthiness design issue. Having said that, the issues and rules related to "record reviews" that constitute part of this NPRM are not addressed in this letter as it is not within the direct remit of the EAAWG to do so.

Turning now to specific comments

1. As this issue is primarily one of safety, it is not clear why the rules are applicable to scheduled services only. Similar aircraft flying unscheduled or cargo operations operate in the same environment and are equally vulnerable to the ageing structural problems.
2. References are given to the methods by which "damage-tolerance-based inspections and procedures" may be derived. Currently AC91-56 is at a higher revision state than quoted. Also Draft AC91-MA differs considerably from the original text, drafted as 91xx, that was jointly agreed between operators, constructors and regulators from North America and Europe under the auspices of the SAAWG in 1992/3 with significant involvement of JAA. Furthermore although addressing exactly the same issue it is not directly compatible with AC91-56 in terms of content, definition and style. To avoid confusion it is recommended that AC91MA be redrafted to be more in line with the proven AC91-56 and the opportunity taken to make editorial improvements generally, such as deleting the mandatory language, e.g. "it is essential that" and "must", and giving complete rather than partial references, e.g. NASGRO.
3. Difficulty has been experienced in trying to interpret exactly as to what the limit of operation is

with/without a damage-tolerance based inspection programme might be. It is suggested that a simple flow chart would help. If the aircraft is not listed in the appendix it would be just 4 years from rule date that operations have to be stopped. Therefore it is particularly important that the appendix list is correct and the design life goals valid.

5. The preamble to the proposed appendices states that the lives are determined “appropriately, if not conservatively”, JAA supports the concept of declared limitations on operation but is concerned that
 - a) the stated lives have not all been established on the same, safe, basis and
 - b) the list does include all the possible types of interest (EAAWG is currently in the process of producing a candidate list of aircraft world-wide, with best estimates of design life goals and would be happy to share it with FAA).
6. For aircraft transferring from country to country it is not clear how the life limits would be interpreted. In some of the other ageing aircraft rules full compliance is expected on transfer; a statement on this should be included in the rule. The rule should also request that any operating limit be directly stated in the aircraft records.
7. A number of aircraft types of European manufacture although not certificated to 25.571 and 45 do fully meet **AC91-56** but it is not **recognised** in this NPRM. The F27 is stated as meeting only 91-60 and the **Shorts330/360** series has quoted lives in the appendices. Consultation with the manufacturers is needed to clarify these positions.
8. Under Related Activity, in the preamble, mention is made of repair assessment and corrosion control but no consideration is given to either :-
 - a) **service** bulletin reviews leading to terminating actions or
 - b) widespread fatigue damage, WFD.However in **draft AC91-MA** considerable emphasis is placed on the WFD issue for failsafe designs. Also recently ARAC TAEIG has made recommendations to FAA on how to approach the important WFD issue generally for all large transport designs. To avoid widespread confusion in the industry further explanation is necessary to put this rule in context with these additional ageing aircraft actions.
9. The recent recommendations on WFD from industry via **ARAC/TAEIG** are understood to indicate that an end date operational limit much sooner than 2010 would be appropriate for a number of aircraft types covered by this rule to avoid a significant safety concern.
10. A number of editorial points have emerged. The appendices do not appear to have the correct references. The term “age sensitive parts” is used, but as this has no commonly known engineering definition so an explanation is required. In the first paragraphs of Description of Benefits the description of fatigue is not physically correct and there is an implication that it may be something other than cracking. In this case it is only cracking that is of concern and it is suggested that the wording is corrected by reference to a standard text or it is deleted. Similarly in Historical Perspective there is reference to “age related fatigue damage” which is an unclear term, does it mean corrosion fatigue or is it the conventional understanding of damage due to repeated cyclic loading?.

I trust you will find these comments on behalf of the European Ageing Aircraft Working Group both constructive and relevant.

Yours Faithfully

John W Bristow Chairman, European Ageing Aircraft Working Group [EAAWG]

cc M. Y **Morrier** JAA Regulations Director
Mr N.Livings Secretary to EAAWG